

**PATIENT SATISFACTION WITH
KIMBROUGH AMBULATORY CARE CENTER**

A Graduate Management Project

Submitted to the Faculty of

Baylor University

In Partial Fulfillment of the

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of

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by

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ABSTRACT

This research project was designed to determine how satisfied customers are with Kimbrough Ambulatory Care Center. A patient satisfaction survey developed by the National Committee for Quality Assurance was the instrument used to obtain data. The study looked at the influence of eleven different independent variables on the dependent variable, "all things considered, how satisfied are you with Kimbrough?" Respondents were also surveyed for the following information: if they were using other health care facilities and if so, why they were using these facilities; would they recommend Kimbrough to their family and friends; and lastly, if they would switch health plans once they were afforded the opportunity of doing so.

The data was analyzed using both descriptive and inferential statistics. The four most statistically significant independent variables on overall satisfaction were overall quality of care and services, care meeting the patient's needs, outcomes of medical care, and thoroughness of treatment. Sixty-eight percent of the respondents reported a satisfaction score of at least very satisfied or better with Kimbrough. Less than four percent reported satisfaction scores of very dissatisfied or completely dissatisfied, couldn't be worse with Kimbrough.

The study found that most beneficiaries were using outside health care

facilities because services were not available at Kimbrough. Of the respondents questioned on whether they planned on switching to a different health plan, less than four percent stated they definitely would. Almost ninety-one percent responded positively, stating they would recommend Kimbrough to their family or friends.

After looking at results from all questions in the survey, it can be concluded, that overall, patients appear to be very satisfied with Kimbrough Ambulatory Care Center and very few are going to opt to change health plans.

TABLE OF CONTENTS

ACKNOWLEDGMENTS.....	ii
ABSTRACT.....	iii
LIST OF TABLES.....	vi
CHAPTER	
I. INTRODUCTION.....	1
Conditions Which Prompted the Study.....	1
Statement of the Problem.....	4
Literature Review.....	4
Purpose.....	17
II. METHODS AND PROCEDURES.....	18
III. RESULTS.....	25
Survey Results.....	25
IV. DISCUSSION.....	34
V. CONCLUSIONS AND RECOMMENDATIONS.....	41
WORKS CITED.....	45
APPENDIX.....	48

LIST OF TABLES

Table

1. Frequency Distribution: Age.....	25
2. Frequency Distribution: Gender.....	26
3. Frequency Distribution: Status.....	26
4. Descriptive Statistics: Independent Variables.....	26
5. Descriptive Statistics: Dependent Variable.....	28
6. Frequency Distribution: Dependent Variable.....	28
7. Correlation Matrix.....	29
8. Linear Regression Model.....	30
9. Frequency Distribution: Patients Seeking Outpatient Care From Doctors Outside of KACC.....	31
10. Frequency Distribution: Patients Staying Overnight In A Hospital Other Than KACC.....	31
11. Frequency Distribution: Why Medical Services Not Received At KACC...	32
12. Frequency Distribution: Recommend KACC To Family And Friends.....	32
13. Frequency Distribution: Switch To A Different Health Plan At Next Opportunity.....	33

CHAPTER 1

Introduction

Conditions Which Prompted the Study

The health care industry has undergone many reforms and changes over the past fifteen years. Today, the current economic and political landscape continues to reiterate that health care systems and health care providers will continue to face changes, reforms, and challenges as they move into the 21st century. The escalation of health care costs is a primary factor that has been driving the changes that are occurring. In 1994, the United States spent approximately one seventh of its gross domestic product on health care (Congressional Budget Office, 1994). It is no longer acceptable or tolerable to either politicians or the American public to continue with this exorbitant spending on health care.

There are major paradigm shifts that have been occurring throughout the health care industry over the past five years. A major emphasis today centers on cutting health care costs. Our present health care system is also being driven by factors such as patient satisfaction with health care plans, capitation, managed care, utilization management, and economic credentialing. Other focuses of

today's health care system center on primary/preventive care, treatment of patients in outpatient settings, and increasing the number of surgical procedures done in ambulatory surgery centers. These new concepts and focuses are the complete antithesis of the way that the health care industry had previously done its business. In the past, the health care industry placed more emphasis on secondary and tertiary care rather than on primary care. The traditional health care system had been designed with the hospital as the focal point. It was in this hospital that all acute illnesses were treated and all surgeries were performed. As evidenced by this practice, the hospital's main function was to serve as the major revenue generating entity in a health care system. With the advent of managed care, this practice is no longer the standard.

The Military Health Services System (MHSS) has not remained immune from the changes that have been occurring in the civilian health care sector. The MHSS faces many of the same challenges that its civilian counterparts face. In addition to these challenges, the MHSS is also confronting unique challenges to its own system. One of these unique challenges is at Kimbrough Ambulatory Care Center, Fort George G. Meade, Maryland.

In June 1996, Kimbrough Army Community Hospital officially became known as Kimbrough Ambulatory Care Center (KACC). This change occurred as

a result of the Department of Defense, Base Realignment and Closure (BRAC) Commission's, decision to close inpatient facilities at Kimbrough. The elimination of inpatient services and the downsizing of Kimbrough was predicated on economic factors. Consequently, the closure of inpatient services also resulted in the closure of the emergency room. Besides decreases in patient services, KACC also underwent civilian and military personnel changes. The BRAC Commission's decision resulted in a number of civilian workers losing their jobs and others being reassigned to departments in which they had no prior experience. The elimination of select patient services (inpatient and emergency room care) coupled with the personnel changes has had a negative impact on the morale of many individuals associated with the Kimbrough health care system. Beneficiaries who use the system are well aware of the decreased patient services. They have also been exposed to the turmoil and poor morale that has been pervasive over the past several months. Some of these patients have therefore chosen to, or have been forced to use other medical facilities for their health care.

The implementation of Tricare, in the fall of 1997, further compounds the challenges facing KACC. Tricare is the Department of Defense's new three-option managed health care program for the military (Army Office of the Chief of Public Affairs, 1996). It will replace CHAMPUS, and will supplement the

military's health care facilities (Army Office of the Chief of Public Affairs, 1996). It offers customers (military dependents and retirees) the choice of receiving medical care either in a military health care setting or in a civilian health care setting (Army Office of the Chief of Public Affairs, 1996). This is a unique challenge to the MHSS because it is the first time ever that military treatment facilities are going to face competition for their military dependents and retirees.

Statement of the Problem

Kimbrough Ambulatory Care Center is confronted with the challenge of continuing to provide quality health care to its beneficiaries with a decreased number of available health care services. With the implementation of Tricare in the very near future, dissatisfied or unhappy military dependents and retirees will have the option of choosing to receive their medical care from either KACC or from a civilian health care provider. Any further decrease or loss of patient workload at KACC may justify and warrant further cuts in personnel and services offered, ultimately leading to the death spiral of KACC.

Literature Review

Satisfaction with health care can be interpreted most appropriately as a measure of the fit between the preferences and expectations of the beneficiaries

and the plan or delivery system in which they participate. Satisfaction scores are not measures of health plan quality, nor can any inference be made about the level of satisfaction that one enrollee would have experienced if he/she had joined a different health plan (Newcomer, Preston, and Harrington, 1996). Healey et.al. state that a patient's satisfaction with his or her care represents an evaluation, a judgement on the care received. Therefore, satisfaction is an outcome of care and can be used to assess how well the care process is working (Healy, Govoni, and Smolker, 1995).

Customer satisfaction is an outcome health managers want to improve, and therefore they are looking for additional information to assist them in determining how to improve that satisfaction (Healy, Govoni, and Smolker, 1995). In today's extremely competitive health care market, patient satisfaction rates are one of the measures that are being used by health care organizations to retain current customers and to attract potential customers. One of the hallmarks of organizations committed to continuous quality improvement is a clear focus on customer satisfaction. Routine analysis of data on customer satisfaction with health care is an integral part of information systems focused on improving quality (Healy, Govoni, and Smolker, 1995). Health care organizations that are not committed to continuous quality improvement or do not use patient

satisfaction surveys, or fail to analyze the data from these surveys will ultimately find themselves facing very troubled financial times. The use of a customer satisfaction survey will therefore be a very useful instrument for gauging how satisfied customers are with services at KACC. This tool will show how satisfied/dissatisfied patients are with the services they currently receive at KACC. The survey will also identify the number of beneficiaries using outside medical facilities for their care and point out why they are using those facilities.

Patients have become more educated in the business of health care and are therefore demanding better health services for their money. Bennett and Mandell report that consumer satisfaction is an important factor in purchase decisions (Bennett and Mandell, 1969). Patient satisfaction has been shown to affect subsequent buying behavior and word of mouth referrals by customers (Peterson, 1988).

Although there are similarities in consumer satisfaction processes regarding goods and services, the latter are more complex. Services are intangible and are therefore more difficult to measure, whereas goods have a number of “search” properties that can be determined prior to purchase and that serve as decision-making input (Nelson, 1974). Conversely, consumers find it more difficult to assess the quality of services, which primarily involve properties that

can be determined only after the service has been purchased and consumed (Peyrot, Cooper, and Schnapf, 1993). This is especially true for professional services such as health care. Health service consumers may use nontechnical characteristics (such as the length of time waiting for a procedure or the pain they experience) to evaluate quality (Peyrot, Cooper, and Schnapf, 1993). In the study, *"Patient Attitude Towards Waiting in an Outpatient Clinic and its Applications"* results show that patient waiting time in outpatient clinics is often the major reason for patients' complaints about their experiences of visiting outpatient clinics. Therefore, patient satisfaction with waiting time plays a crucial role in the process of health quality assurance or quality management (Huang, 1994).

Most of the current research on patient satisfaction related to health services focuses on the hospital setting and in particular, on one's inpatient experience. Researchers have given little attention to outpatient health services despite the fact that most health services are delivered on an outpatient basis and that health care is increasingly being transferred to outpatient settings to achieve cost containment objectives (Peyrot, Cooper, and Schnapf, 1993).

Satisfaction with care is an important outcome which may determine if a person seeks medical advice, follows a prescribed treatment, and maintains a continuing relationship with the practitioner (Jones, Carnon, Wylie, and Hedley,

1993). Cleary and McNeil also show that higher levels of patient satisfaction may lead to better patient compliance, better communication, increased likelihood of return for care, and thus better patient outcomes (Cleary and McNeil, 1988). In the outpatient setting, it has been suggested that dissatisfaction with clinics leads to non-attendance and losses to follow-ups (Jones, Carnon, Wylie, and Hedley, 1993). John Ware points out that whether or not one believes the public is able to judge quality, it is important to keep in mind that they do, whether they are informed or not. The disenrollment rates for California HMO's in the late 1970s and the 1980s demonstrates this fact. Plans with higher ratings had lower disenrollment rates of approximately three percent, whereas those with lower ratings often had disenrollment rates as high as thirty percent (Ware, 1995). These results are especially important and relevant to the current situation at KACC.

The Joint Commission on Accreditation of Healthcare Organizations Manual on Standards identifies a need for a systematic approach to patient care evaluation. The manual specifically addresses gathering, assessing, and acting upon information related to patient satisfaction surveys as a tool which could be used by hospitals to carry out those actions (Joint Commission on Accreditation of Healthcare Organizations, 1993). Scoring standardized responses to

standardized questions is an efficient way to measure health status. Carefully constructed sets of survey questions have greatly helped research efforts over the past ten years (Ware and Sherbourne, 1992). Among the surveys most useful with diverse groups and treatments are surveys that address general health concepts not specific to any age, disease, or treatment group (Ware and Sherbourne, 1992).

In an environment of increasing cost containment, with or without managed competition, payers such as the government and employers are likely to encourage or even require beneficiaries to enroll in prepaid managed care programs priced lower than fee-for-service indemnity insurance plans (Rubin, Gandek, Rogers, Kosinski, McHorney, and Ware, 1993). As managed care continues to proliferate, the Military Health Services System and KACC will have to continue to evolve with the changes. The Base Realignment and Closure Commission's decision to close inpatient services at KACC has generated many problems for KACC, yet at the same time it has spurned opportunities.

Kimbrough is actively seeking to increase the amount of workload performed in its Same Day Surgery Center. Currently, the same day surgery operation is running at around 45% efficiency. This is reflective of four to ten surgical cases per day. Kimbrough has an operating suite of four rooms, and there is adequate staff in the post-anesthesia care unit and same day surgery ward to accommodate

an increase in surgical workload. Increasing the workload in the Same Day Surgery Center will be one way of justifying the importance of keeping KACC open. It is vitally important for those patients who use the Same Day Surgery Center to have a satisfying experience. Satisfied customers are the best marketing tool available to an organization.

Cost containment efforts, advanced technology, and new anesthetic techniques have generated increased growth and utilization of ambulatory surgery. This major shift toward ambulatory surgery has encouraged greater competition among health care providers and institutions. Increased competition between hospital-based and freestanding ambulatory surgery programs has created a greater focus on health care marketing and effective management and has prompted renewed interest in consumer satisfaction (Pica-Furey, 1993).

One study conducted in 1985 showed that 69.3% of patients were dissatisfied with the health care staff in ambulatory surgery settings. The patients complained that staff members took too long to explain care or provided no information at all (Pica-Furey, 1993). A more recent study conducted in 1992 found that 50% of ambulatory surgery patients believe they were discharged too early. More than half of the patients report that they would have preferred inpatient surgery (Pica-Furey, 1993). In several other studies, patients report high

degrees of satisfaction with ambulatory surgery. Patients expressed satisfaction with the quality of nursing care, patient teaching, and the convenience of care. Overall satisfaction with the technical/professional, interpersonal/trusting, and educational components of ambulatory care have been documented. Ambulatory surgery patients have reported more satisfaction than inpatients with the educational aspects of their care (Pica-Furey, 1993).

Group practices are also measuring patient satisfaction as never before. Competition and pressure from health plans and employers are the two main reasons (Terry, 1996). Employers are demanding data on "quality" and patient satisfaction is the most easily accessible measure. In addition, groups are doing large-scale, sophisticated surveys to get data they can use themselves for quality improvement (Terry, 1996).

Managed care organizations are also conducting patient-satisfaction surveys. However, if the managed care organizations share any of the results with medical groups, it is generally the group-wide data only. Observers state that information is often gathered from small samples that it is meaningless on the individual physician level (Terry, 1996). Nevertheless, the National Committee for Quality Assurance (NCQA) requires health maintenance organizations to deliver patient satisfaction data as a condition for accreditation (Terry, 1996).

La Puma and Schiedermayer define a health maintenance organization as an organized system of health care that provides a defined, comprehensive set of services to a defined population for a fixed, periodic per person or per family fee (LaPuma and Schiedermayer, 1996).

The National Committee for Quality Assurance is an independent, not for profit organization that provides information that enables purchasers and consumers of managed care plans to distinguish among plans based on quality, therefore allowing them to make more informed decisions (www.ncqa.org., 1996).

The NCQA is governed by a Board of Directors that includes employers, consumer and labor representatives, health plans, quality experts, regulators, and representatives from organized medicine.

The NCQA is centered around two primary functions: accreditation of prepaid managed care organizations and HMO's, and establishment of performance measures, which are known as, Health Employer Data and Information Set (HEDIS). One of the performance measures included in HEDIS is a patient satisfaction survey. The mission statement of NCQA is:

NCQA promotes improvements in the quality of patient care provided through managed health plans. NCQA's primary function is to develop and apply oversight processes and measures of performance for health plans. HEDIS is committed to providing information on managed care quality to the public, consumers, purchasers, health plans, and other interested parties (www.ncqa.org., 1996).

The National Committee for Quality Assurance was started in 1979 by the Group Health Association of America and the American Association of Foundations for Medical Care (Kongstvedt, 1993). In 1988, the Robert Wood Johnson Foundation funded meetings where NCQA began making inquiries to major purchasers. Specifically, they sought major purchasers interest in the NCQA becoming an independent external review (Kongstvedt, 1993). In 1989, as NCQA began to develop into an independent organization, the support of the managed care industry was apparent as it gave matching grants to NCQA (Kongstvedt, 1993).

Health Employer Data and Information Set is rapidly becoming one of the most prominent and popular measures of a health plan's performance (Appleby, 1995). HEDIS is a set of standardized performance measures designed to assure that purchasers and consumers have the information they need to reliably compare the performance of managed health care plans. It is sponsored, supported, and maintained by the National Committee for Quality Assurance. HEDIS, in combination with information from NCQA's accreditation program, which is a rigorous and expert evaluation of how managed care plans are organized and how they operate, provides the most complete view of health plan quality available to guide choice among competing health plans. HEDIS 3.0, which will be widely

implemented across the country in 1997, will provide purchasers and consumers with an unprecedented ability both to evaluate the quality of different health plans along a variety of important dimensions, and to make their plan decisions based upon demonstrated value rather than simply on cost.

HEDIS 3.0 was developed by a broad-based committee, the Committee on Performance Measurement (CPM), whose members were chosen to reflect the diversity of constituencies that performance measurement must serve: purchasers, both private and public (Medicare and Medicaid), consumers, organized labor, medical providers, public health officials, and health plans. In addition, a number of other individuals were asked to serve on the CPM, to bring other important perspectives, as well as additional expertise in the areas of quality management and the science of measurement. The CPM and its related subcommittees were organized and staffed by NCQA. The funding for the work came from a wide variety of public and private sources (www.ncqa.org/hedis/30exsum.htm#what measures, 1996).

HEDIS 3.0 is the third HEDIS set released by NCQA. In contrast to earlier HEDIS versions, HEDIS 3.0 is slightly different. HEDIS 3.0 is "outcomes," or results oriented. For the first time, health plans will be expected to measure how well their patients are able to function in their daily lives, in a way

that will open a window on health plan success at improving functional health.

Also, for the first time, satisfaction results will be assessed with a single instrument, providing the ability to capture and compare members' experiences across different health plans (www.ncqa.org/hedis/30exsum.htm#whatis, 1996).

All health care facilities have incentives to try to improve all aspects of a patient's encounter with that particular health care system. These health plans have strong reasons to improve systems where failure in performance is associated with dissatisfaction among patients, because patient dissatisfaction is known to correlate with increased disenrollment (Zapka, Palmer, Hargraves, Nerenz, Frazier, and Warner, 1996).

As previously stated, one of the eight areas that HEDIS 3.0 measures is satisfaction with the experience of care. These measures are intended to provide information about whether a health plan can satisfy the diverse needs of its members. The desire for information in this area recognizes that members tell us important things about the care they receive. It reflects the opinion that encounters with the health plan should occur in a manner that is responsive to and respectful of the preferences and interests of its members, and that its members' satisfaction is the most revealing summary of the extent to which this is so (www.ncqa.org/hedis/30exsum.htm#whatmeasures, 1996).

The Annual Member Health Care Survey, version 1.0 is the result of a collaboration between health plans, purchasers, technical experts, and the National Committee for Quality Assurance. The primary purpose of the survey is to provide information to purchasers, plan members, and potential plan members, and thereby to support more informed decisions about health plan selection (NCQA, 1995). The questions comprising the survey were selected to assess satisfaction with a variety of elements of health plan performance and provide insights into the burden of illness in the population the plan serves (NCQA, 1995).

The importance of standardized information about enrollee satisfaction is increasingly clear. Consumers have expressed great interest in an economical and reliable process for assessing enrollee satisfaction. In addition, consumers are increasingly important audiences for this information. In many respects, member satisfaction information is the most “user friendly” and understandable of performance measures to a wide variety of individuals (NCQA, 1995). In focus groups run by NCQA, consumers have stated that satisfaction information would be an important factor for them in selecting a plan.

The Annual Member Health Care Survey, version 1.0, has four content areas. The first area contains screening questions to confirm that the respondent is covered by the health plan, to establish the length of their coverage, and to assess the

member's need for, as well as use of, in-plan and out-of-plan health services. The second area addresses satisfaction with care and plan services and features. The last two areas address the respondent's health and daily activities and general socio-demographic questions (NCQA, 1995). For the purpose of my study, I will only address the first two content areas.

Purpose (Variables/Working Hypothesis)

The purpose of this project is to use a broad-based questionnaire to evaluate customer satisfaction with services at Kimbrough Ambulatory Care Center. The data collected will provide insight into how satisfied or dissatisfied patients are with the care and services they receive at KACC. Results will then be interpreted to determine if radical changes need to be implemented immediately or to what degree patients are satisfied with the current system. The data will also reveal what percentage of patients, as well as why these patients are seeking medical care outside of the Kimbrough health system. It is hypothesized that a high satisfaction score is a function of a number of contributing factors (refer to Appendix, questions 10a-10k). The dependent variable in the study is: All things considered, how satisfied are you with Kimbrough? The independent variables are those questions 10a-10k in the satisfaction survey.

CHAPTER 2

Methods and Procedures

The restructuring and downsizing of Kimbrough Ambulatory Care Center (KACC) over the past year has been a tumultuous time for everyone in the Fort Meade community, and in particular, for patients who had been receiving their medical care at KACC. After rotating through many departments at KACC, I deemed one of the most important areas to address is overall patient satisfaction with Kimbrough's current health care system. I surveyed customers on: how satisfied or dissatisfied they are with the Kimbrough medical system; and if they were using other health care facilities for medical care, why were they using those facilities. I also surveyed respondents on the questions: would you recommend Kimbrough to your family and friends if they needed care; and do you intend to switch to a different health plan when you next have an opportunity?

I obtained initial ideas and suggestions for my study from various sources. I talked with staff in many patient care areas as well as patients in those same areas. Staff members consisted of head nurses, physicians, enlisted soldiers, and secretaries. I discussed with and received input for this project from: LTC Goad, Deputy Commander for Administration; LTC Perez, Chief, Department of Nursing; and LTC Conrad, Assistant Chief, Department of Nursing.

A thorough review of the literature was conducted on patient satisfaction which included a focus on consumer satisfaction in the outpatient arena. I found through my literature search that the National Committee for Quality Assurance had designed a satisfaction tool that was part of the Health Employer Data and Information Set. This tool is used in the civilian sector to evaluate health maintenance organizations (HMO) and other outpatient facilities. With the closure of the emergency room and inpatient services, KACC has become structured like a civilian outpatient facility. I therefore believe that using the same type of survey for KACC's organization is appropriate.

The patient satisfaction instrument found in HEDIS 3.0 addresses areas of patient satisfaction with a specific health care setting, and also addresses if patients are seeking medical care outside of their health plan. The questionnaire allows the researcher space at the end of each section to add any other questions that may provide greater detailed input without affecting the validity or reliability of the survey. I used this area to obtain more specific demographic information (gender, status of respondents, and age) on the consumers using the system.

The HEDIS 3.0 patient satisfaction survey is comprised of four different sections that deal with health plan enrollment information, health care and plan, further information on services, and health daily activities. For the purpose of my

study I found that the first two sections were that most applicable for the setting here at KACC. The questions from the two sections I did not use were not useful or relevant to a military health care setting.

The collection of the data came from a convenience sample of patients who use KACC for medical care. Patient satisfaction surveys were distributed in various clinics in the care center which included: General Outpatient Clinic, Internal Medicine Clinic, and the Same Day Surgery Center. The data collection period ran from 09 December 1996 to 20 December 1996. There were a total of 300 surveys distributed throughout those areas. The survey instrument was a twelve item, self-administered questionnaire. All questions were closed end and responses for the dependent and independent variables were based on a modified 7-point Likert scale and 5-point Likert scale, respectively. Patients evaluated their satisfaction with KACC using a numerical score from 1 to 7, where "1" equals "completely satisfied" and "7" equals "completely dissatisfied, couldn't be worse." Respondents with no opinion had the option of selecting a neutral midpoint of "neither satisfied nor dissatisfied" (a score of "4"). Patients evaluated the independent variables in the survey using a numerical score of 1 to 5, where "1" equals "poor" and "5" equals "excellent." The midpoint "3" indicated a response of "good." Questions related to patient demographics used nominal

scales to assign responses to distinct categories based on characteristics of the respondents. A copy of the survey instrument is in the Appendix.

Receptionists in each area were asked to distribute the survey to patients when they signed in for their appointment. After receiving their care, patients were asked to return the completed survey back to the receptionist. To prevent duplication of results, administrative personnel were asked to screen each patient prior to filling out the survey to see if they had already completed the survey in another department.

Scientific requirements of a project call for the measurement process to be valid and reliable, while the operational requirements call for it to be practical. Practicability has been defined as economy, convenience, and interpretability (Cooper and Emory, 1995). Validity is the extent to which differences found with a measuring tool reflect true differences among respondents being tested. Two major forms of validity are internal and external validity. The external validity of research findings refers to its ability to be generalized across persons, settings, and times. Internal validity is the ability of the instrument to measure what it is supposed to (Cooper and Emory, 1995).

Content validity of a measuring survey is the extent to which it provides sufficient coverage of the topic under study. It is important for the instrument to

contain a representative sample of the universe (Cooper and Emory, 1995).

Criterion-related validity reflects the success of measures used for prediction or estimation. Predicting an outcome or estimating the existence of a current behavior or condition uses predictive and concurrent validity, respectively (Cooper and Emory, 1995).

In addition to content and criterion-related validity, a third type of validity is construct validity. In attempting to evaluate construct validity, both theory and the measuring instrument are used.

Besides validity, a survey tool must also have reliability. Reliability, which is a key factor in determining the usefulness of a survey refers to the degree to which scores are free from errors of measurement. More specifically, reliability is the ratio of true-score variance to observed-score variance, or the percent of a score that is information as opposed to random noise (McHorney and Ware, 1994). A measure is reliable if it provides consistent results. Reliable instruments work well at different times under different conditions. The distinction of time and condition is the basis for frequently used perspectives on reliability-stability, equivalence, and internal consistency (Cooper and Emory, 1995). A measure is stable if one can secure consistent results with repeated measurements of the same person with the instrument. Equivalence is a second

perspective on reliability that considers how much error may be introduced by different investigators (in observation) or different samples of items being studied (Cooper and Emory, 1995). Internal consistency uses only one administration of an instrument or test to assess consistency or homogeneity among the items. There are other index-used remedy techniques that may influence the internal consistency coefficient. The Kuder-Richardson Formula 20 and Cronbach's Coefficient Alpha are two examples. Cronbach's alpha has the most utility for multi-item scales at the interval level of measurement (Cooper and Emory, 1995). As a minimum measure of internal consistency, I set the alpha level at .60.

The desire to accommodate plans wanting to conduct fuller surveys at a relatively minor marginal cost has to balance with the methodological issue of order effects (the reliability and validity of a tool is compromised by alterations in the sequence of questions). The survey instrument I used had left several places throughout where additional questions could be inserted without interfering with the validity and reliability of the study design. Also, the survey could be reformatted (type size, shading, etc.) without compromise. However, the questions themselves, their response categories, and their order could not be changed in any reformatting of the survey (NCQA, 1995). I have not altered or changed the question format or wording in any way. I have inserted several

questions at the end of each section. These were questions that addressed demographic information of the respondents.

The statistical software package, SPSS 7.0® was used for all statistical calculations and computations. I ran descriptive statistics, consisting of means and standard deviations, and also frequencies on certain questions in the survey. I then analyzed a 2-tailed correlation matrix to look for any statistical correlations between the dependent variable (all things considered, how satisfied are you with Kimbrough) and the eleven independent variables. I then choose the four most significant independent variables for further statistical analysis and computations. To determine each of the four independent variables contribution to overall satisfaction with the Kimbrough health plan, a linear regression model was run separately for each variable and aggregately for all four variables. I also looked at what percentage of patients are receiving medical care outside KACC and why they were doing so. Lastly, I reported the findings from the following questions: Would you recommend Kimbrough to your family if they needed care, and do you intend to switch to a different health plan when you next have an opportunity (note- this last question was intended only for family members and retirees).

CHAPTER 3

Survey Results

A sample of (n=162) patients were surveyed at Kimbrough Ambulatory Care Center (KACC) to determine: how satisfied patients are with the medical care they are receiving at KACC; what percentage of patients are using outside medical facilities for their medical care and why are they using those services; if patients would recommend Kimbrough to family or friends; and if they planned on switching health plans. There were 300 surveys distributed throughout KACC. A total of 162 surveys were returned which represented a 54% return rate. Tables 1, 2, and 3 report frequency demographic information derived from the respondents.

Table 1. Frequency Distribution for AGE			
	Frequency	Percent	Cumulative Percent
Less than 16	3	1.9	11.9
17-25	24	14.8	16.7
26-40	63	38.9	55.6
41-64	51	31.5	87.0
65 or older	21	13.0	100.0

Table 2. Frequency Distribution for GENDER			
	Frequency	Percent	Cumulative Percent
Male	99	61.1	61.1
Female	63	38.9	100.0

Table 3. Frequency Distribution for STATUS			
	Frequency	Percent	Cumulative Percent
Active Duty	78	48.1	48.1
Retired	36	22.2	70.4
Family Member	48	29.6	100.0

Table 4 reports descriptive statistics on all eleven independent variables.

Table 4. Descriptive Statistics: INDEPENDENT VARIABLES		
	Mean Score	Standard Deviation
Ease of making appointments for medical care	3.32	1.26
Length of time you wait between making an appointment for routine care and the day of your visit	3.63	1.08
Thoroughness of treatment	3.80	1.16
Attention given to what you had to say	3.76	1.19

Table 4. Descriptive Statistics: INDEPENDENT VARIABLES		
Number of doctors you have to chose from	3.19	1.09
Ease of choosing a personal physician	3.17	1.09
Amount of time you have had with doctors and staff during a visit	3.74	.95
The outcomes of your medical care, how much you are helped	3.69	1.13
How well your care meets your needs	3.61	1.13
How well the whole system works together to coordinate your medical care, including how well different people and departments communicate with you and with each other about your care	3.50	1.12
Overall quality of care and services	3.67	1.13

Table 5 reports descriptive statistics on the dependent variable (All things considered, how satisfied are your with Kimbrough?). *NOTE* It is important to understand that to ensure the reliability and validity of the survey instrument, questions and question formats were not to be changed. In this study the independent variables were based on a Likert scale of 1-5, with high scores indicating excellent ratings and low scores indicating poor ratings. The dependent variable was based on a Likert scale that was the opposite. Low scores indicated high satisfaction, and high scores indicated low satisfaction. Table 6 reports a frequency distribution for the dependent variable.

Table 5. Descriptive Statistics: DEPENDENT VARIABLE		
	Mean Score	Standard Deviation
All things considered, how satisfied are you with Kimbrough?	2.5	1.23

Table 6. Frequency Distribution for Dependent Variable: All Things Considered, How Satisfied Are You With Kimbrough?			
	Frequency	Percent	Cumulative Percent
Completely Satisfied	18	11.1	11.1
Very Satisfied	92	56.8	67.9
Somewhat Satisfied	28	17.3	85.2
Neither Satisfied nor Dissatisfied	10	6.1	91.3
Somewhat Dissatisfied	8	4.9	96.3
Very Dissatisfied	4	2.5	98.8
Completely Dissatisfied, Could Not be Worse	2	1.2	100.0

A 2-tailed correlation matrix was run and then analyzed to look for significant correlation findings between the dependent variable and any of the eleven independent variables. The correlation matrix below indicates strong correlations $p=.000$ for the four most statistically significantly independent variables. A Pearsons Correlation was also run on those four significant variables with the alpha level being set at .01 for statistical significance.

Table 7.— Correlations **Indicates correlation is significant at the 0.01 level (2-tailed)

		Satisfied with KACC	Overall quality of care/services	Care meets your needs	Outcomes of your medical care	Thorough- ness of treatment
Pearson Correlation	Satisfied with KACC	1.000	-.739**	-.701**	-.707**	-.721**
	Overall quality of care/services	-.739**	1.000	.862**	.845**	.758**
	Care meets your needs	-.701**	.862**	1.000	.944**	.830**
	Outcomes of your medical care	-.707**	.845**	.944**	1.000	.849**
	Thorough- ness of treatment	-.721**	.758**	.830**	.849**	1.000
r	Satisfied with KACC	.	.000	.000	.000	.000
	Overall quality of care/services	.000	.	.000	.000	.000
	Care meets your needs	.000	.000	.	.000	.000
	Outcomes of your medical care	.000	.000	.000	.	.000
	Thorough- ness of treatment	.000	.000	.000	.000	.

A regression analysis was then performed individually on each of the four independent variables, and then aggregately on all four variables. Result for each independent variable include: *Overall quality of care/services* $r = .739$, $r^2 = .546$, $t(160) = 13.867$, $p = .000$; *Care meets your needs* $r = .701$, $r^2 = .491$, $t(160) = 12.431$, $p = .000$; *Outcomes of your medical care* $r = .707$, $r^2 = .500$, $t(160) = 12.647$, $p = .000$; *Thoroughness of treatment* $r = .721$, $r^2 = .519$, $t(160) = 23.434$, $p = .000$. The linear regression model with the aggregate of all four independent variables appears in Table 8.

Table 8.-- Linear Regression Model ^{a,b}

Model	Variables		R	R Square	Adjusted R Square	Std. Error of the Estimate
	Entered	Removed				
1	Overall quality of care and service Care meets your needs Outcomes of your medical care Thoroughness of treatment ^{c,d}		.779	.607	.597	.7824

a. Dependent Variable: Satisfied with KACC

b. Method: Enter

c. Independent Variables: (Constant), Over all quality of care and services, Care meets your needs, Outcomes of your medical care, Thoroughness of treatment

d. All requested variables entered.

A second objective of this survey was to look at what percentage of patients were using outside medical facilities for their medical care and why they were using those services. Tables 9, 10, and 11 summarize the findings.

Table 9. Frequency Distribution for Did Patients Seek Outpatient Care From Doctors Outside Of KACC			
	Frequency	Percent	Cumulative Percent
Yes	68	41.9	41.9
No	94	58.1	100.0

Table 10. Frequency Distribution for Did Patients Stay Overnight In A Hospitals Other Than KACC			
	Frequency	Percent	Cumulative Percent
Yes	15	9.3	9.3
No	147	90.7	100.0

Table 11. Frequency Distribution for Why Medical Services Were Not Received At KACC			
	Frequency	Percent	Cumulative Percent
N/A	90	55.6	55.6
Cost Was Less Outside of KACC	2	1.2	56.8
Services or Care Not Available	56	34.6	91.4
Preferred Another Doctor or 2d Opinion	7	4.3	95.7
Physical Problems Made it Hard to get to Clinic	7	4.3	100.0

Tables 12 and 13 report frequencies from the following questions: Would you recommend Kimbrough to your family if they needed care? Do you intend to switch to a different health plan when you next have an opportunity? This last question was directed exclusively to family members and retirees.

Table 12. Frequency Distribution for Would You Recommend Kimbrough To Your Family And Friends If They Needed Care?			
	Frequency	Percent	Cumulative Percent
Yes	147	90.7	90.7
No	15	9.3	100.0

Table 13. Frequency Distribution for Do You Intend To Switch To A Different Health Plan When You Next Have An Opportunity?			
	Frequency	Percent	Cumulative Percent
Not Applicable	78	48.1	48.1
Definitely Not	30	18.5	66.7
Probably Not	36	22.2	88.9
Probably Yes	12	7.4	96.3
Definitely Yes	6	3.7	100.0

CHAPTER 4

Discussion

The 1997 Tricare Conference radiated the message that increased patient satisfaction, within the Military Health Services System (MHSS), is now becoming a critical element for which all commanders will be responsible. Presentations by senior leaders from Department of Defense's, Health Affairs, and from the Surgeon Generals of each service all touched on the importance of working toward increasing patient satisfaction throughout the MHSS. The implementation of Tricare throughout the MHSS has triggered this big push for pursuing and achieving higher satisfaction scores. Under Tricare, patients (dependents and retirees) will be afforded the opportunity of choosing to receive their health care from either the MHSS or from civilian health care providers. This is a paradigm shift from the old way of doing business, whereby there was not much emphasis placed on whether or not patients were satisfied or dissatisfied with the MHSS. However, today, customers can vote with their feet if they are unhappy with their current system. Any mass exodus of beneficiaries from our system could be very detrimental to the MHSS. This type of scenario could provide ammunition to the war fighters, as justification for further budgetary and personnel cuts throughout

the MHSS.

The results from this study have now taken on greater importance after hearing the discussions on patient satisfaction from the Tricare Conference. Three hundred patient satisfaction surveys were distributed throughout KACC. A total of 162 satisfaction surveys were returned. The return rate was representative of 54% of the surveys that had been distributed. There were three surveys discarded because the respondents had filled out only the first page of the four page survey. There were two questions that I had to screen and not input data. Question number 8 was only for active duty service members. Some retirees and family members circled what their branch had been or what their spouse's current branch was. For those responses, I just ignored their answers. Question number 12 in the survey was intended only for dependents and retirees and not active duty service members. However, some service members filled that question out also. These responses were also ignored when the data was entered. Once the surveys were collected and screened, the data was then entered into the statistical software program, SPSS 7.0.®

I first ran frequency distributions on the demographic variables of age, gender, and status of the respondents. Approximately 53% of the respondents fell between the ages of 17-40. With regards to gender, 61.1% of the respondents

were male and 39.1% were female. The status of the respondents showed that 48.1% were active duty service members, 29.6% were family members, and 22.2% were retirees. A further breakdown of the active duty service members indicated that 70.4% were Army, 11.2% were Navy, 14.8% were Air Force, and 3.8% were Marines.

Descriptive statistics (means and standard deviations) were then run on each of the eleven independent variables. The coding for these questions was based on a Likert Scale of 1-5, with "1" being poor; "2" being fair; "3" being good; "4" being very good; and "5" being excellent. Mean scores for all independent variables were all reported as 3.0 or higher. The highest mean scores were reported for *thoroughness of treatment* 3.80 ± 1.16 ; *attention given to what you had to say* 3.76 ± 1.19 ; and *time you have with doctors and staff during a visit* $3.74 \pm .95$. The high scores from these three variables speak very highly of the direct health care providers at KACC. These three factors are directly controlled by the health care providers and are therefore minimally affected by outside or extraneous influences.

The lowest mean scores were reported for *ease of choosing a personal physician* 3.17 ± 1.09 ; *number of doctors you have to choose from* 3.19 ± 1.08 ; and *ease of making appointments for medical care* 3.32 ± 1.26 . The first two scores

are a reflection of what occurs when personnel and budgetary constraints are imposed or forced upon a health care organization. These are examples of external influences that KACC and other civilian health care organizations are struggling with under a managed care environment. As for, *ease of making appointments for medical care*, this is an area where continuous evaluation and reevaluation is being done in order to improve the process of making appointments easier for the customer.

Descriptive statistics and a frequency distribution were analyzed on the dependent variable, *all things considered, how satisfied are you with Kimbrough?* The coding of responses for this questions was based on a Likert Scale of 1-7, with "1" completely satisfied, could not be better; "2" very satisfied; "3" somewhat satisfied; "4" neither satisfied or dissatisfied; "5" somewhat dissatisfied; "6" very dissatisfied; and "7" completely dissatisfied, couldn't be worse. The mean score of 2.50 ± 1.23 fell half way between very satisfied and somewhat satisfied with KACC. The frequency distribution showed that a cumulative 67.9% of the respondents were very satisfied or higher with KACC. Less than 9% of the respondents reported being somewhat dissatisfied or lower. This 9%, though not alarming, has to be looked at and addressed in order to try to lower it. These results are almost paralleled by the results from Table 12. Table 12 showed the

results from the question, *would you recommend Kimbrough to your family and friends if they needed care?* 90.7% of the respondents reported they would, whereas 9.3% reported they would not. These report card results indicate that most people appear to be satisfied with the current services and care that they are receiving at KACC. These results are consistent with those found in the study by Peterson, "Guest Relations: Substance or Fluff" (Peterson, 1988). She showed that patient satisfaction affects subsequent buying behavior and word of mouth referrals by customers.

I next analyzed a 2-tailed correlation matrix to find which of the eleven independent variables had the greatest impact on, *all things considered, how satisfied are you with Kimbrough?* The four most significant variables were: *overall quality of care*, $r = .739$; *thoroughness of treatment*, $r = .721$; *outcomes of your medical care*, $r = .707$; and *care meets your needs*, $r = .701$. These correlations indicated statistical significance at the .000 level.

Linear regression was next run with the four significant independent variables and the dependent variable. Results showed the correlation coefficient, $r = .779$, and the coefficient of determination, $r^2 = .607$. This indicated that 60.7% of the variance in the dependent variable could be accounted for from the four independent variables. This confirms the hypothesis that a high satisfaction score

is a function of a number of independent variables.

The reliability of the study was tested using Cronbach's alpha. The four significant independent variables were used to calculate the result. Cronbach's alpha was reported as .9569, which is indicative of extreme high reliability.

The second area that the survey addressed was what percentage of patients were using outside medical facilities for their medical care and why. Results indicated that 42.6% of patients have used outpatient facilities for physician visits, and that 9.3% have had overnight hospital stays outside of KACC. Frequencies also indicated that most people went outside of the Kimbrough health system because services or care was not available at KACC.

With the approach of Tricare in the very near future, one of the most important questions addressed in the survey, asked family members and retirees, *do you intend to switch to a different health plan when you next have an opportunity?* Looking at the entire population of respondents who answered the survey, less than 4% of those respondents indicated that they definitely planned on leaving the Kimbrough system. These results are very important to KACC because it provides an estimate of the numbers of people who are going to want to be enrolled in the Kimbrough health system once Tricare is implemented. These results are also consistent with the research of John Ware, who shows that health

care plans with higher satisfaction ratings had lower rates of disenrollment (Ware, 1995). Additional information on Kimbrough was gathered from the question: *Would you recommend Kimbrough to your family and friends if they needed care?* Results indicated that greater than 90% of the respondents would recommend the plan to family and friends.

CHAPTER 5

Conclusions and Recommendations

Kimbrough Ambulatory Care Center is facing the challenge of providing quality health care to its beneficiaries with a decreased number of available health care services. In addition, the military's version of managed care, Tricare, will provide family members and retirees the option of choosing to receive their health care from either the Military Health Services System or from civilian providers. It is therefore imperative for KACC to have high satisfaction ratings from its customers with the services that are currently available. These satisfied customers will then hopefully choose to remain with the Military Health Services System once Tricare is implemented.

It was my intent in this study to determine how satisfied customers were with KACC; to determine how many customers and why these customers were using outside medical facilities for their health care; and lastly, to get a general sense from family members and retirees if they were planning to change medical plans once they were afforded the opportunity.

The results from my study indicated that approximately 68% of the respondents reported being very satisfied or completely satisfied with the system.

In comparison, less than 4% of the respondents reported that they were very dissatisfied or that the system could not be worse. Patients rated high scores on the thoroughness of treatment they received, the overall quality of care/services, the care meeting their needs, and outcomes of their medical care. Despite the high ratings on these components, a continued emphasis needs to be placed on these variables plus all the other independent variables in the study, to ensure patients continue to be satisfied. However, there is room for improvement in some areas of patient satisfaction such as the number of doctors to choose from, the ease of choosing a personal physician, and the ease of making medical appointments.

The patient satisfaction survey I used can be used in a number of ways. The results reported from the survey could possibly help with the justification of asking for increased staffing (health care providers and appointment clerks). On a broader level, the survey can be used as a quality improvement tool for each of the areas that were surveyed, as well as in all other departments in Kimbrough.

The satisfaction survey results may also be used by our marketing department in an effort to publicize to the Fort Meade community that Kimbrough is taking care of its customers and producing high satisfaction rates. These are opportunities for Kimbrough to boast of the high satisfaction ratings to the community, and yet at the same time demonstrate to its customers that those areas

of lower scores are also being addressed. The marketing campaign could enlighten soldiers, commanders, family members, and retirees that Kimbrough is a first class health care institution with the services that it provides. These are the types of opportunities that Kimbrough must exploit in order to compete with civilian providers for patients.

It can also be concluded from the study that most of the family members and retirees who are using services outside of KACC are doing so because the services are not available at KACC. Most of the respondents who were asked if they planned to switch health plans once they have the opportunity stated that they would not. The implications from this question will assist the managed care office in its forecasting of the number of family members and retirees who may enroll in Tricare Prime.

Specific recommendations for future improvements in this study would be to include some of the speciality clinics (dermatology, orthopedics, and ENT) into those areas where surveys are passed out. Surveys could also be distributed in areas such as pharmacy, lab, and x-ray. These areas could possibly provide more insight into the question, how well the whole system works together to coordinate your medical care, including how well, different people and departments communicate with you and each other about your care. There may have been a

bias in the results that occurred as a result of the choices from the independent variables. There was not a neutral midpoint (as was the case when answering the dependent variable) that could be chosen. The middle response of "good" definitely had a positive connotation to it, therefore making three of the five choices positive in nature. Also, the use of an on-site survey, while appearing reliable and cost efficient, may be highly biased. Therefore, consideration should be given to administering the survey by mail and increasing the sample size to reduce the influence of response bias. The last recommendation is to repeat this study one year from now.

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APPENDIX

SURVEY INSTRUMENT

1. Our records indicate that you are eligible to receive health care at Kimbrough Ambulatory Care Center. Is this true?

1. Yes
2. No If no, please do not complete this survey.

2. How long have you been covered by Kimbrough's health plan?

1. Less than 6 months
2. At least 6 months, but less than a year
3. At least 1 year, but less than 2 years
4. At least 2 years, but less than 5 years
5. 5 years or more

3. Please estimate the total number of visits you have had for the following health services in the past 12 months.

(Circle one)

a. Visits to a doctor or other health care professional for any illness, injury, or preventive care to help you stay well.	None	1-4	5-9	10+
b. Overnight hospital stays (count each entire stay as 1)	None	1-4	5-9	10+

4. Were any of these services NOT received through Kimbrough Ambulatory Care Center?

(Circle all that apply)

a. Visits to a doctor or other health care professional for any illness, injury, or preventive care to help you stay well.	Yes	No
b. Overnight hospital stays	Yes	No

5. If you did not receive services through Kimbrough, please tell us why.

(Circle all that apply)

Cost was less outside Kimbrough.....1
Service or care was not available at Kimbrough.....2
Preferred another doctor or wanted a second opinion.....3
Kimbrough did not approve care.....4
Physical problems made it difficult for you to get to the
office or clinic.....5

For questions 6-9, circle one.

6. I am: Male Female

7. I am: Active Duty Retired Family Member Other ____

8. If Active Duty, my service is: Army Navy Air Force Marine

9. My age is: Less than 16 17-25 26-40 41-64 65 or older

10. Thinking about your health care and the services you receive from
Kimbrough Ambulatory Care Center, how would you rate the following?

(Circle one number on each line)

	POOR	FAIR	GOOD	VERY GOOD	EXCELLENT
a. Ease of making appointments for medical care by phone	1	2	3	4	5
b. Length of time you wait between making an appointment for routine care and the day of your visit	1	2	3	4	5
c. Thoroughness of treatment	1	2	3	4	5
d. Attention given to what you have to say	1	2	3	4	5

	POOR	FAIR	GOOD	VERY GOOD	EXCELLENT
e. Number of doctors you have to choose from	1	2	3	4	5
f. Ease of choosing a personal physician	1	2	3	4	5
g. Amount of time you have with doctors and staff during a visit	1	2	3	4	5
h. The outcomes of your medical care, how much you are helped	1	2	3	4	5
i. How well your care meets your needs	1	2	3	4	5
j. How well the whole system works together to coordinate your medical care, including how well different people and departments communicate with you and with each other about your care	1	2	3	4	5
k. Overall quality of care and services	1	2	3	4	5

10. All things considered, how satisfied are you with Kimbrough?

(Circle one)

Completely satisfied, could not be better.....1
 Very satisfied.....2
 Somewhat satisfied.....3
 Neither satisfied nor dissatisfied.....4
 Somewhat dissatisfied.....5
 Very dissatisfied.....6
 Completely dissatisfied, couldn't be worse.....7

11. Would you recommend Kimbrough to your family or friends if they needed care?

(Circle one)

Definitely yes.....1
Probably yes.....2
Probably not.....3
Definitely not.....4

12. (This question is only for family members and retirees.)

Do you intend to switch to a different health plan when you next have an opportunity?

(Circle one)

Definitely yes.....1
Probably yes.....2
Probably not.....3
Definitely not.....4